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65. (Amended) The carbon foam of claim 58 wherein the foam provides a bulk thermal conductivity from about 58 W/m·K to about 106 W/m·K.

C4 66. (Amended) The carbon foam of claim 65 characterized by an X-ray diffraction pattern exhibiting relatively sharp doublet peaks at  $2\theta$  angles between 40 and 50 degrees.

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C5 69. (Amended) The carbon foam of claim 56 wherein the foam provides a specific thermal conductivity greater than about  $109 \text{ W}\cdot\text{cm}^3/\text{m}\cdot\text{K}\cdot\text{g}$ .

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71. (Amended) The carbon foam of claim 69 characterized by an X-ray diffraction pattern having an average d002 spacing of about 0.336 and exhibiting relatively sharp doublet peaks at  $2\theta$  angles between 40 and 50 degrees.

C6 72. (Amended) The carbon foam of claim 56 wherein the foam provides a specific thermal conductivity from about  $109 \text{ W}\cdot\text{cm}^3/\text{m}\cdot\text{K}\cdot\text{g}$  to about  $200 \text{ W}\cdot\text{cm}^3/\text{m}\cdot\text{K}\cdot\text{g}$ .

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C7 76. (Amended) The carbon foam of claim 56 wherein the foam provides a specific thermal conductivity greater than copper.

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C8 78. (Amended) The carbon foam of claim 77 characterized by an X-ray diffraction pattern exhibiting relatively sharp doublet peaks at  $2\theta$  angles between 40 and 50 degrees.

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C9 80. (Amended) The carbon foam of claim 56 wherein the foam provides a specific thermal conductivity greater than four times that of copper.